

What is claimed is:

1. A method of measuring the current within a PWM driver steps comprising:
 - 5 providing a source current to the PWM driver creating a high side current and a low side current;
 - measuring the high side current with a first circuit;
 - transmitting the measurement from the first circuit to a second circuit via a first signal;
 - 10 measuring the low side current with the second circuit;
 - adding the low side current measurement to the first signal to create a second signal; and
 - transmitting the second signal to a receiving device.
- 15 2. The method of claim 1 wherein the receiving device is a monitoring device.
3. The method of claim 1 wherein the receiving device is a control.
- 20 4. The method of claim 1 wherein the first circuit consists of a plurality of resistors electrically connected to a circuit power source, a first diode electrically connected to the plurality of resistors; and a first transistor adapted to transmit an output signal.
- 25 5. The method of claim 4 wherein the second circuit consists of a plurality of resistors electrically connected to a circuit power source and the first transistor; a second diode electrically connected to the plurality of resistors
- 30 and adapted to add the output signal of the first circuit to

the output current of the second circuit to create a second signal.

6. The method of claim 1 wherein the PWM driver consists
5 of a gate driving circuit electrically connected to a first and second transistor.

7. A circuit for measuring the current within a PWM driver comprising:

10 a voltage source for the PWM driver electrically connected to a first circuit;
said voltage source creating a high side current and a low side current within the circuit;
mean in the first circuit to measure the current within the
15 high side of the circuit and to transmit a first signal containing this current measurement;
a second circuit electrically connected to the first circuit via the first signal and adapted to measure the current within the low side of the circuit;
20 said second circuit being capable of adding the current from the first signal with the current measured to create a second signal; and
a receiving means for receiving the second signal.

25 8. The circuit of claim 7 wherein the receiving means is a monitoring device.

9. The circuit of claim 8 wherein the receiving means is a control device.

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10. A method of measuring the current within a PWM driver that drives a coil of an electrohydraulic valve steps comprising:

5 providing a source current to the PWM driver creating a high side current and a low side current;

measuring the high side current with a first circuit;

transmitting the measurement from the first circuit to a second circuit via a first signal;

measuring the low side current with the second circuit;

10 adding the low side current measurement to the first signal to create a second signal; and

transmitting the second signal to a receiving device.